

## **ABSTRACT**

### **DETERMINATION OF A SELECTED POSITION OF A MOBILE COMMUNICATIONS DEVICE IN A COMMUNICATIONS NETWORK**

The position of a mobile communications device within a communications network (localization) is determined using communications signals of a base station that communicates with the mobile communications device using a mobile communications network. A possible area of location is determined using a non-linear communication model based on non-linear Bayesian filtering. The selected position of the mobile communications device is then determined on the basis of the possible area of location.